

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

THE EARLIEST GENERIC NAME FOR THE NORTH
AMERICAN DEER, WITH DESCRIPTIONS OF FIVE
NEW SPECIES AND SUBSPECIES.

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For many years the generic name *Cariacus* Lesson, 1842, stood unchallenged for our Virginia Deer and its allies. In February, 1895, Mr. Oldfield Thomas reinstated Gloger's *Dorcelaphus*, as having one year priority, but stated that it was by no means clear that this name would stand, since it was antedated, he was informed by Dr. T. S. Palmer, by two of Rafinesque's names—*Panallodon*, 1831, and *Odocoileus*, 1832. I have not been able to see a copy of the rare publication in which Rafinesque's *Panallodon* appeared. It is entitled 'Enumeration and Account of some remarkable natural objects of the Cabinet of Professor Rafinesque, in Philadelphia,' and is said to have been published in Philadelphia in November, 1831. In a review in 'The Monthly American Journal of Geology and Natural Science' for May, 1832 (Vol. I, No. 11, pp. 509-510), it is said that *Panallodon* "owes its existence to a jawbone, six inches long, found in a Solar temple in Kentucky. He [Rafinesque] thinks this akin to mazama, which was somewhat similar to the antelopes, but having teeth 'more like some carnivorous animals, but no canine tooth.'" Apart from the insufficiency of the diagnosis, the small size of the jaw and character of the teeth indicate that the animal could not have been a deer.

Rejecting *Panallodon* as untenable, the name next in order of

date is *Odocoileus*.* This name was based on the second or third (probably the third) left upper premolar of the Virginia deer, or a closely related form, found in a cave near Carlisle, Pennsylvania. Fortunately there is no room for doubt as to the animal to which the tooth belonged, for Rafinesque described it in detail and published natural-size figures of both outer and inner faces of the tooth. Since the name *Odocoileus* was published 9 years earlier than *Dorcelaphus* of Gloger, and 10 years earlier than *Cariacus* Lesson, it appears to be the earliest generic name for the American deer of which *O. speleus* Raf. [= *O. virginianus* (Bodd.)] is the type species. The earliest generic name for the South American deer of the group typified by *Cervus rufus* I have previously shown to be *Mazama* Rafinesque, 1817.†

Five new deer in the collection of the Biological Survey are here described: Two of these, one from Sitka, Alaska, the other from southern California, are northern and southern representatives of the Columbia Blacktail (*Odocoileus columbianus*), to which they are closely related; the third, from Cerros Island, Mexico, is a strongly marked insular species of the Mule Deer group, of which *Odocoileus hemionus* is the type. The remaining two, from southern Mexico, appear to be very distinct.

***Odocoileus columbianus sitkensis* subsp. nov.**

Type from Sitka, Alaska, No. 74383, ♀ im., U. S. Nat. Mus., Biological Survey Coll. Collected Aug. 8, 1895, by C. P. Streater. Original No. 4767.

Characters.—Similar to *O. columbianus*, but smaller, with smaller skull and teeth, and much shorter ears (in type: from anterior base 125; from notch 105); black of upper side of tail replaced on basal half with fulvous hairs, like those of back.

Color.—Type specimen at end of summer (with patches of gray winter coat coming in irregularly through worn red summer coat): upper parts from forehead to base of tail, including outer sides of legs and feet, fulvous; face grizzled gray, becoming pale dull fulvous inferiorly; eyelids black; a V-shaped mark extending from eyes half way to nose, dusky; space between eyes grizzled fulvous and black; ears grizzled gray and dusky, not becoming blackish anteriorly; inside of ears white. Chin and under lip, except bar between angles of mouth, white; posterior part of belly, inguinal region, inner side of thigh, and a disconnected strip along posterior aspect of foreleg, white; throat grayish fulvous; rest of under

* Atlantic Journal, vol. I, No. 3, p. 109, "Autumn of 1832,"

† Science, NS, I, 208, Feb. 22, 1895.

parts pale fulvous; tarsal gland blackish in middle, surrounded by fulvous. Tail: above, basal half fulvous like back; terminal half (except white tip) black; under side white, the white at tip showing from above.

Cranial characters.—Skull similar to that of *columbianus*, but somewhat smaller; tooth row shorter; lachrymal pit short and very deep; ante-orbital vacuity relatively small.

***Odocoileus columbianus scaphiotus* subsp. nov.**

Type from Laguna Ranch, Gabilan Range, Calif., No. 65162, ♂ ad., U. S. Nat. Mus., Biological Survey Coll. Collected April 24, 1894, by J. E. McLellan. Orig. No. 797.

Characters.—Similar to *O. columbianus*, but ears very much larger; coloration paler.

Color.—Type specimen in worn winter pelage (April 24): upper parts uniform grizzled gray; under parts with white areas as in *columbianus*; ears longer and *very much broader* than those of *columbianus*.

Cranial characters.—Skull similar to that of *columbianus*, but lachrymal pit narrower and more elongate anteriorly; anteorbital vacuity much larger; teeth larger and heavier.

Measurements.—Type specimen (in flesh): Total length 1465; tail vertebrae 135; hind foot 452. Ear in dry skin: length from anterior base 178; from notch 168; breadth 106.

***Odocoileus cerrosensis* sp. nov.**

Type from Cerros (or Cedros) Id. off Lower California, Mexico, No. 80782, ♂ ad., U. S. Nat. Mus., Biological Survey Coll. Collected August 9, 1896, by A. W. Anthony.

Characters.—Similar in general to the California Mule Deer, *Odocoileus hemionus californicus*, but smaller.

Color.—Upper parts dark grizzled gray with scattered hairs of pale fulvous; a blackish band along median line from occiput to rump and on upper surface of tail, usually but not always interrupted on rump; muzzle grayish-white, becoming gray on sides of face; a small dusky spot on top of nose close to nose pad, and another on each side just behind nostril; a dark transverse band between eyes anteriorly, curving back over eyes and reaching posteriorly to behind plane of eyes, thus forming a broadly U-shaped mark; ears grizzled gray with a darker area on anterior face just above middle; inside of ears white; under lip and chin whitish, with a small elongate black spot on each side of middle of lip, and a small dark triangle on middle of chin; throat and neck dark dusky gray, becoming blackish between forelegs and along middle of breast; sides of breast and belly grizzled gray like back; inguinal region and posterior third of middle of belly whitish, becoming buffy on thigh and reaching down on inner side of leg a little below heel; posterior aspect of forelegs and feet buffy; rest of legs and feet buffy fulvous. Tail: basal two-thirds whitish, usually with dark band above; terminal third abruptly

blackish and enlarged, and with some fulvous hairs on upper side. Tarsal gland normal, on inner side of calcaneum; metatarsal gland about 75–80 mm. in length, occupying approximately middle third (really a little above middle third) of outer side of metatarsus.

Cranial characters.—Skull similar in general to that of *O. hemionus californicus* but smaller and lighter, with *decidedly longer nasals* and *very much smaller teeth*. The nasals are very narrow anteriorly, and are produced so far posteriorly as to reach within 3 or 4 mm. of plane of hinder border of anteorbital vacuities. The postero-lateral edge of the nasals abutting against the anteorbital vacuity is nearly straight and so elongated that its length equals the combined breadth of nasals on fronto-nasal suture. The lachrymal pit is deep, but less so than in *O. h. californicus*. The anteorbital vacuity is decidedly larger than in *californicus*; the orbitosphenoïd decidedly narrower, and the anterior (sublachrymal) extension of the jugal equally broad. The external openings of both of the lachrymal ducts are on the inner side of the orbital rim.

Antlers.—The antlers are small, well bowed outward, with incurved tips, and have only a single branch which is given off from the upper third of the main tine and projects backward and upward. The largest antler of five apparently adult bucks in the collection measures only 190 mm. from burr to tip in a straight line; the spread between the tips is 230; greatest spread at base of incurved tips 260.

Measurements.—Type specimen, measured from dry skin: Total length 1560; tail vertebræ 180; hind foot 380; ear from crown anteriorly 180.

***Odocoileus thomasi* sp. nov.**

Type from Huehuetan, Chiapas, Mexico, No. 77866, ♂ ad., U. S. Nat. Mus., Biological Survey Coll. Collected Feb. 22, 1896, by E. W. Nelson and E. A. Goldman. Orig. No. 9359.

Characters.—Size rather large; *color red all the year round*; tail as in the Virginia Deer; metatarsal gland a very small spot on postero-external aspect of metatarsus about midway between calcaneum and hoofs.

Color.—*Winter pelage* (type specimen): Upper parts including side of belly, middle of breast and neck all round, fulvous, becoming bright grizzled golden fulvous on back; muzzle grayish dusky; forehead mixed fulvous and black, becoming solid black in front of plane of ears, with a fulvous spot over each eye posteriorly; chin white with a black spot on each side of middle of lip, the spots nearly meeting on median line; inguinal region, inner side of thighs, middle part of belly, and posterior aspect of forelegs, white. Tail: upper surface bright fulvous; under surface white. *Summer pelage* (Tonala, Chiapas, Aug. 10): Similar, but upper parts simply fulvous, lacking the grizzled golden appearance of winter pelage; forehead fulvous like rest of upper parts (lacking the black of winter); muzzle dark grayish with a small dusky spot just behind nose pad and another behind each nostril. [It is possible that the Tonala specimen is not *O. thomasi*.]

Cranial characters.—Skull and teeth similar in general to those of *Cariacus clavatus* True [= *Odocoileus truei*]* from Honduras but somewhat larger, skull broader, nasals shorter, anteorbital vacuities larger; antlers larger (about 120 mm. long) and in one specimen (from Tonalá, Chiapas) developing a short prong on inner side midway of the length of the tine.

The skull of an old buck (No. 74885), with mature antlers in the velvet, was collected by Mr. Nelson at Santa Efigenia, Oaxaca, July 21, 1895. The antlers are unlike those of any deer known to me, and I incline to the belief that they are those of *O. thomasi* when full grown. They measure 200 mm. in straight line from burr to tip and 240 over curve, and slope directly backward almost on plane of face, the tips curving inward and slightly forward (spread between tips 110; greatest spread 165). They give off a spike on inner side about 60 mm. from burr, which curves inward and forward (agreeing with curvature of beam) and reaches back about 110 from burr. These spikes are symmetrical on the two sides and their incurving tips are only 50 mm. apart. The left beam gives off posteriorly a prong 70 mm. below the tip and 50 mm. in length, which is directed backward and slightly inward. The burrs are very large and, with the basal part of the beams, very rugose. The skull bearing these antlers is somewhat smaller than the type of *thomasi*, and the rostrum and nasals are narrow, as usual in old age. The flesh measurements of this animal were: Total length 1400; tail vertebræ 165; hind foot 378; height at shoulder 780.

Measurements.—Type specimen: Total length 1544; tail vertebræ 153; hind foot 425.

Odocoileus nelsoni sp. nov.

Type from San Cristobal, highlands of Chiapas, Mexico. No. 76201, ♂ 2d year, U. S. Nat. Mus., Biological Survey Coll. Collected Oct. 1, 1895, by E. W. Nelson and E. A. Goldman. Orig. No. 8524.

Characters.—Size medium; color dark brownish gray, with top of head and dorsal band blackish; antlers (2d year) small sub-cylindrical spikes 65 mm. in length.

Color.—Upper parts dark grizzled brownish-gray, the tips of hair becoming pale fulvous posteriorly; a black stripe from nose pad to forehead, bifurcating and sending a narrow band over each eye in type specimen leaving top of head grizzled gray and black [in another specimen whole top of head blackish, the difference probably seasonal]; a blackish dorsal band from top of head to middle of back on rump; ears grizzled gray; tail like that of Virginia Deer; fulvous above, white below. A black band

* In 1888 Mr. F. W. True described a new deer from Honduras under the name *Cariacus clavatus*. But the specific name *clavatus* for a deer of this group is preoccupied by *Cervus clavatus* Ham. Smith (in Griffith's Cuvier, Animal Kingdom, V, 315, 1827). Hence it is necessary to rename Mr. True's deer, which I take pleasure in doing in honor of its describer. It may be known as *Odocoileus truei*.

across white chin; sides of face and neck all round dark grizzled gray, becoming dusky between forelegs; axillary and inguinal regions, posterior aspect of forelegs and inner side of thigh white; sides of belly and legs pale grayish-fulvous. Metatarsal gland a small spot 10 mm. long surrounded by white hairs, on outer side of metatarsus midway between end of calcaneum and tip of hoof. Tarsal gland normal.

Cranial characters.—Skull small and light with short nasals, small ante-orbital vacuities, shallow lachrymal pits, broad anterior (sublachrymal) extension of jugals, broad orbitosphenoids, and remarkably small and narrow audital bullæ. The skull and teeth resemble those of *O. acapulcensis* more closely than they do any other deer known to me, but may be distinguished from *acapulcensis* by the shortness of the nasals, great breadth of the orbitosphenoid anteriorly and of the anterior extension of the jugal, and the small size of the audital bullæ.

Measurements.—Type specimen, ♂ of 2d year, not full grown; measured in flesh: Total length 1250; tail vertebræ 170; hind foot 360. Height at shoulder 650. Ear in dry skin: from anterior base 140; from notch 120.